



ELECTRONIC TUBE REFERENCE

8184

Power - Beam (NOT sweep) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Very-high-power pulsed beam-power tube with matrix oxide cathode, designed for extreme pulse service with tens of kilovolts and very high peak plate current.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	22 V / 12.6 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
MAXIMUM PLATE VOLTAGE	25000 V
MAXIMUM SCREEN VOLTAGE	2500 V
MAXIMUM PLATE DISSIPATION	10000 W
<i>Electrical section extracted from supplied RCA data sheet.</i>	

Very-high-power pulsed beam-power tube with matrix-type oxide-coated unipotential cathode. The supplied RCA sheet was used for published ratings, characteristics, operating conditions, and capacitances where present.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 6 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 6 OF 7

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	22 V	WholeTube
Heater/filament current nominal	12.6 A	WholeTube
Grid No.1 to cathode	6 pF	Published source row
Grid No.1 to cathode (value 2)	100 pF	Published source row
Plate to cathode & heaterb~~	0 pF	Published source row
Plate to cathode & heaterb~~ (value 2)	3 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	24 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	1 pF	Published source row
Grid No (value 3)	5 pF	Published source row
G2 -Grid-No	2	Published source row
temperature to	250 A	Published source row
heater, plate, grid-No	2	Published source row
Plate Dower, grid-No	2	Published source row
grid No	1 °C	Published source row
grid No (value 2)	250 °C	Published source row
Plate Core Temperatured	250 °C	Published source row
PEAK POSITIVE PULSE PLATE VOLTAGEg	25000 V	Published source row
DC PLATE VOLTAGEg	15000 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
POSITIVE-PULSE GRID-No	2	Published source row
DC-PULSE PLATE CURRENT	80 A	Published source row
DC PLATE CURRENT	500 mA	Published source row
GRID-No	2 W	Published source row
GRID-No (value 2)	150 W	Published source row
PLATE DISSIPATION (Average)	10000 W	Published source row
Heater Current	1 A	Published source row
Heater Current (value 2)	11.7 A	Published source row
Heater Current (value 3)	13.5 A	Published source row
Grid No.1 to cathode & heater	91 pF	Published source row
Grid No.1 to cathode & heater (value 2)	113 pF	Published source row
Plate to cathode & heater	23 pF	Published source row
Plate to cathode & heater (value 2)	0.03 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	21 pF	Published source row
Grid No (value 3)	26 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	3 pF	Published source row
Grid No (value 3)	1.5 pF	Published source row
Grid-No	1 V	Published source row
Grid-No (value 2)	1 V	Published source row
Grid-No (value 3)	4 V	Published source row
Grid-No (value 4)	-27 V	Published source row
Grid-No (value 5)	-61 V	Published source row
Grid-No.1 Cutoff Voltage	1 V	Published source row
Grid-No.1 Cutoff Voltage (value 2)	5 V	Published source row
Grid-No.1 Cutoff Voltage (value 3)	-95 V	Published source row
Note	1 V	Published source row
Note (value 2)	22 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Note	4 V	Published source row
Note (value 2)	5000 V	Published source row
Note (value 3)	2 V	Published source row
Note (value 4)	1500 V	Published source row
Note	5 V	Published source row
Note (value 2)	5000 V	Published source row
Note (value 3)	2 V	Published source row
Note (value 4)	1500 V	Published source row
volts, and do grid-No	1 A	Published source row
The heater of the	8184	Published source row
voltage of	22 min	Published source row
voltage of (value 2)	5 min	Published source row
recommended that the heater voltage be reduced to	80 %	Published source row
The maximum-rated data and grid-No	2	Published source row
Published electrical value	5.53	Published source row
Published electrical value (value 2)	4.03	Published source row
GRID-No	2 A	Published source row
GRID-No (value 2)	0 mA	Published source row
CATHODE-HEATER	24	Published source row
TEMPERATURE°	250 °C	Published source row
TEMPERATURE° (value 2)	92 °C	Published source row
TEMPERATURE° (value 3)	0.8 °C	Published source row
EXAMPLE~MAXIMUM TEMPERATURE RISE (	205	Published source row
ii WHEN INCOMING –AIR TEMPERATURE IS	45	Published source row
HEATER VOLTS =	22 V	Published source row
HEATER VOLTS =	22 V	Published source row
Amplification factor	1	Promoted field corroboration

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical value	2 MHz	Published source row
Published electrical value (value 2)	500 MHz	Published source row
Voltage (AC or DC)	22 V	Published source row
Voltage (AC or DC) (value 2)	23 V	Published source row
Current at heater volts =	22 V	Published source row
Current at heater volts = (value 2)	12.6 V	Published source row
Minimum heating time	5 min	Published source row
Mu-Factor, Grid No	2	Published source row
Mu-Factor, Grid No (value 2)	1	Published source row
for plate volts =	5000 V	Published source row
for plate volts = (value 2)	2 V	Published source row
Maximum plate voltage	25000 V	Promoted field corroboration
Maximum plate dissipation	10000 W	Promoted field corroboration
Verified Maximum plate voltage	25000 V	Verified from supplied datasheet rating/characteristic table
Verified Maximum screen voltage	2500 V	Verified from supplied datasheet rating/characteristic table
Verified Maximum plate dissipation	10000 W	Verified from supplied datasheet rating/characteristic table

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker